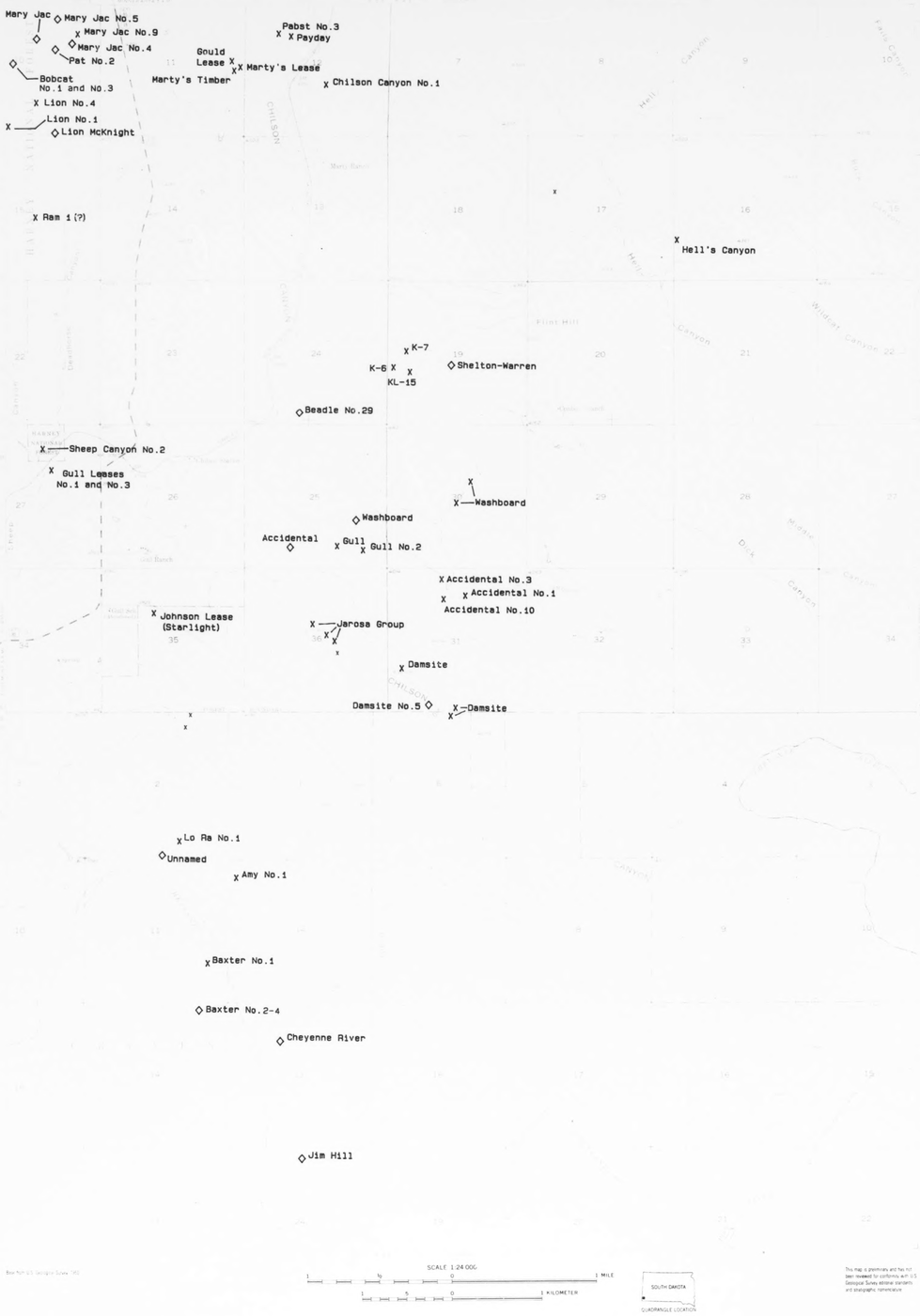
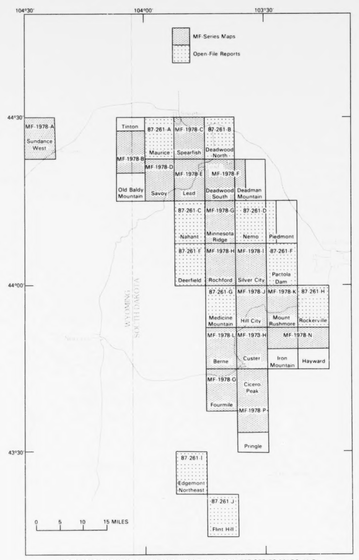
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY





INDEX MAP SHOWING MINES AND PROSPECT MAPS (MF-SERIES MAPS AND OPEN-FILE REPORTS) IN THE BLACK HILLS REGION

OPEN-FILE REPORT
OF 87-261-J

EXPLANATION

Mine—Location known. Distinguished from prospect by name of mine and size of symbol. Alternate names or synonyms in parentheses. If there is enough space on the map, the entire mine name and synonyms are shown; otherwise, mine name may be abbreviated and synonyms deleted from map. Full mine names and all synonyms are shown in the "Alphabetic list of mines"

X **Large pit**

◇ **Mine**—Approximate location shows. Open pit, shaft, adit, or other type of opening

Prospect

X **Pit**

INTRODUCTION

This map is one in a set of 26 maps (see index map) at 1:24,000 scale of the Black Hills region of South Dakota and Wyoming on which are shown a geologic classification of mines, a bibliography of mineral deposits, and locations of active and inactive mines, prospects, and patented mining claims. Some of these maps have been published as U.S. Geological Survey Miscellaneous Field Studies Maps (MF-series) and some as U.S. Geological Survey Open-File Reports (OF-series); see index map. An earlier unpublished version of this set of maps was the data base from which plate 4 (scale 1:250,000) of DeWitt and others (1986) was compiled. Subsequent to that publication the set has been revised and updated and prospects and patented claims have been added. These revised and more detailed 1:24,000- scale maps should be used for the equivalent areas of plate 4 of DeWitt and others (1986).

J. J. Norton, J. A. Redden, J. P. Gries, and W. L. Roberts reviewed the set of maps. Rob Yambrick helped digitize much of the information.

SOURCES OF INFORMATION

There are no patented mining claims in the Flint Hill 7 1/2 minute quadrangle.

Locations of mines and prospects were compiled from all available published and unpublished data. The locations of active and inactive mines in this quadrangle were taken from Bell and Sales (1955), Bell and Post (1971), Braddock (1953), Gott, Wolcott, and Bowles (1974), Roberts and Rapp (1965), Trusdell, Daddazio, and Martin (1982), U.S. Bureau of Mines (1955, 1986), and U.S. Geological Survey (1986). Also, in some instances, different sources of information gave conflicting location information for mines with the same name. Where possible, this conflict was resolved by comparing the name of the mine to adjacent patented claims, by comparing the description of the deposit to the known geology and topography of the area, or by communication with past owners of the property. In some instances, a unique location was not possible with existing information; in that event the most logical location was chosen. The location of some or many mines on this map may differ from those in present data bases such as the U.S. Bureau of Mines Mineral Inventory Location System (MILS) or the U.S. Geological Survey Mineral Resources Data System (MRDS), formerly the Computerized Resources Information Bank (CRIB).

Locations of prospects in this quadrangle were taken from Bell and Post (1971) and Braddock (1953). Because many quadrangles, or parts of quadrangles, have not been mapped in as much detail as other quadrangles, comparison of the density of prospects from one quadrangle to another, or even within one quadrangle, is not warranted. As an example, part of a quadrangle may be shown on the map as having more prospects than another part, but the first part may have been mapped in greater detail than the second part. Similarly, a part of a quadrangle may have many prospects that are not shown on this map because the original source of information did not show prospect pits.

Geologic data for the map are from Bell and Sales (1955), Bell and others (1956), Bell and Post (1971), Bidgood (1973), Bowles (1968), Bowles and others (1980), Bright (1955), Cuppels (1962), DeWitt and others (1986), Gott, Wolcott, and Bowles (1974), Gries (1974), Hall (1955), Lang (1963), Lisenbee (1985), Page and Redden (1952), Renfro (1969), Schnabel (1956), and Shawe and Granger (1965).

PRECISION OF LOCATION INFORMATION

All mine symbols except the unfilled diamond (◇) indicate that the location of the deposit is known within a 200-foot radius. The type of opening at a mine (adit, shaft, open pit, trench, and others) is designated by one of ten different symbols. The unfilled diamond symbol indicates that the location is known only to within a 1/4 mile radius, and that the type of mine opening is unknown.

Mines and prospects whose locations could not be verified to within less than a 1/4 mile radius were not plotted on the map.

MINE LISTS

On the map, the most common or most used name of a mine is normally next to its mine symbol. If there is space, any alternate names or synonyms are in parentheses following the most common name. On some maps, where space does not permit showing the first name or any alternate names, the names are shown by a single letter, two letters, or an abbreviation of the name; the mines are keyed to that letter or abbreviation in the alphabetic and numeric lists. Mines with more than one name have the alternate name(s) or synonym(s) shown in parentheses in the alphabetic lists. The first alternate name or synonym is also alphabetized in the alphabetic list of mines; second or third alternate names may not be alphabetized. Uncertain alternate names are not alphabetized and are followed by a query (?).

CLASSIFICATION OF MINES AND DEPOSITS

Mines and deposits are categorized according to geologic criteria of age, environment of formation, and contained metals, as in DeWitt and others (1986, p. 52-53). Deposit-type letter designations (O, CO, and so on) corresponding to those in DeWitt and others (1986) for deposit types are used in the alphabetic list of mines. The criteria used for the deposit types are briefly summarized below and are explained more fully in DeWitt and others (1986).

PRINCIPAL TYPES OF DEPOSITS

O--Roll-front deposits in Cretaceous rocks are stratabound accumulations of uranium and vanadium that were formed in a near surface, locally reducing environment. Low temperature, bicarbonate-rich fluids containing minor amounts of selenium and molybdenum moved down-dip through the host rocks and precipitated ore minerals in carbon-rich horizons.

CO--Coal deposits in the Cretaceous Inyan Kara Group are stratabound accumulations of organic remains that formed in a fresh-water environment about 100-130 Ma (million years ago). Organic substances, mostly plant remains, were modified into subbituminous coal and carbon-rich sedimentary rocks.

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Alphabetic list of mines

[Deposit-type letter designations are explained in the text]

Deposit Type	Name of Mine	Location
O	Accidental	Sec. 25 T8S R3E
O	Accidental No.1	Sec. 31 T8S R4E
O	Accidental No.10	Sec. 31 T8S R4E
O	Accidental No.3	Sec. 31 T8S R4E
O	Amy No. 1	Sec. 12 T9S R3E
O	Baxter No.1	Sec. 14 T9S R3E
O	Baxter No.2-4	Sec. 14 T9S R3E
O	Beadle No.29	Sec. 24 T8S R4E
O	Bobcat No.1 and No.3	Sec. 10 T8S R3E
CO	Cheyenne River	Sec. 13 T9S R3E
O	Chilson Canyon No.1	Sec. 12 T8S R4E
O	Damsite	Sec. 31 T9S R4E
O	Damsite	Sec. 6 T9S R4E
O	Damsite No.5	Sec. 31 T9S R4E
O	Gould Lease	Sec. 14 T9S R3E
O	Gull	Sec. 25 T9S R3E
O	Gull Leases No.1 and No.3	Sec. 27 T9S R3E
O	Gull No. 2	Sec. 25 T9S R3E
O	Hell's Canyon Group	Sec. 16 T9S R4E
O	Jarosa Group	Sec. 36 T9S R3E
CO	Jim Hill	Sec. 24 T9S R3E
O	Johnson Lease (Starlight)	Sec. 35 T9S R3E
O	K-6 (Kellogg)	Sec. 19 T9S R4E
O	K-7 (Kellogg)	Sec. 19 T9S R4E
O	KL-15 (Kellogg)	Sec. 19 T9S R4E
O	Kellogg (K-6)	Sec. 19 T9S R4E
O	Kellogg (K-7)	Sec. 19 T9S R4E
O	Kellogg (KL-15)	Sec. 19 T9S R4E
O	Lion	Sec. 10 T8S R3E
O	Lion McKnight	Sec. 10 T8S R3E
O	Lion No. 4	Sec. 10 T8S R3E
O	Lo Ra No.1	Sec. 2 T9S R3E
O	Marty's Lease	Sec. 11 T8S R3E
O	Marty's Timber	Sec. 11 T8S R4E
O	Mary Jac	Sec. 10 T8S R3E
O	Mary Jac No. 4	Sec. 10 T8S R3E
O	Mary Jac No. 5	Sec. 10 T8S R3E
O	Mary Jac No.9	Sec. 10 T8S R3E
O	Pabst No.3	Sec. 12 T8S R4E
O	Pat No.2	Sec. 10 T8S R3E
O	Payday	Sec. 12 T8S R4E
O	Ram 1 (?)	Sec. 15 T8S R4E
O	Sheep Canyon No.2	Sec. 27 T9S R3E
O	Shelton-Warren	Sec. 19 T8S R4E
O	Starlight (Johnson Lease)	Sec. 35 T9S R3E
CO	Unnamed	Sec. 1 T9S R3E
O	Washboard	Sec. 25 T8S R3E
O	Washboard	Sec. 30 T8S R4E

SCALE 1:24 000

1 0 1 MILE

1 0 1 KILOMETER

SOUTH DAKOTA
QUADRANGLE LOCATION

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

MAP OF MINES, PROSPECTS, AND CLASSIFICATION OF MINERAL DEPOSITS IN THE FLINT HILL 7 ½ MINUTE QUADRANGLE, BLACK HILLS, SOUTH DAKOTA

By

Ed DeWitt, D. P. Buscher, Anna Burack Wilson, and T.M. Johnson

1988